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MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER
BUI, KIEU OANH T

ART UNIT	PAPER NUMBER
2611	5

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/684,389	KIM, JIN PIL
	Examiner	Art Unit
	KIEU-OANH T BUI	2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 9 is objected to because of the following informalities: on line 1 of claim 9, --The

method—should be corrected as –A method—instead to avoid lacking of antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless --*
> *(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*
> *The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).*

3.   Claims 1-3, 7-10, 15-24, and 27-30 are rejected under 35 U.S.C. 102(e) as being

anticipated by Lownes et al. (U.S. Patent No. 6,137,539/ or "Lownes").

        Regarding claim 1, Lownes discloses "a virtual channel table for a broadcast protocol,

comprising identification information in a bit stream syntax thereof, said identification

information identifying each channel as one of an active and an inactive channel", i.e., Table 1

shows a virtual channel table (VCT) for a broadcast protocol with some of channels comprising

identification in a bit stream syntax including active and inactive channels because the virtual

channel assignment does not ensure the validity of available channels unless updating regularly

in a cycle loop (Fig. 2/step 214 & 216, col. 5, line 50 to col. 6/line 64 with Table 1, and col.

7/lines 10-38).

As for claim 2, Lownes discloses "wherein said virtual channel table is included in a

program and system information protocol for a digital broadcast" (col. 6/lines 40-64 for analog

and digital channels are included in the VCT).

As for claim 3, Lownes discloses "wherein said digital broadcast is any one of a digital

terrestrial broadcast and a digital cable broadcast" (col. 1/lines 18-52 for either a satellite digital

broadcast, digital terrestrial broadcast or digital cable broadcast is included).

As for claim 7, Lownes inherently suggests "wherein said identification information

assigns at least one bit of a reserved field to indicate that a corresponding channel is an inactive

channel", i.e., those reserve bits as shown within Table 1 includes active and inactive virtual

channels as noted in claim 1 above because a flag is checked whether this channel is valid or not,

see col. 7/lines 10-38).

As for claim 8, Lownes shows "wherein said reserved field is positioned in a statement

of a for loop in a bit stream syntax of the virtual channel table" (Fig. 2 for a loop routine and col.

6/lines 17-64 for bit stream syntax).

Regarding claim 9, Lownes discloses "a method of broadcasting using a virtual channel

table in a broadcasting protocol, said method comprising: including identification information in

the virtual channel table, said identification information identifying a channel as being one of an

active and an inactive channel, and transmitting the virtual channel table; and determining at a

receiver whether the channel is inactive based upon the identification information defined in the

virtual channel table, by parsing the virtual channel table", i.e., Table 1 shows a virtual channel

table (VCT) for a broadcast protocol with some of channels comprising identification in a bit stream syntax including active and inactive channels because the virtual channel assignment does not ensure the validity of available channels unless updating regularly in a cycle loop (Fig. 2/step 214 & 216, col. 5, line 50 to col. 6/line 64 with Table 1, and col. 7/lines 10-38).

As for claim 10, Lownes inherently suggests "wherein including identification information further comprises, when a channel is inactive, setting a value of a program number field in the virtual channel table to "0" and inhibiting a service location descriptor from being transmitted through the virtual channel table", i.e., those reserve bits as shown within Table 1 includes active and inactive virtual channels as noted in claim 1 above because a flag is checked whether this channel is valid or not and the service does not start until a valid one is checked, see col. 7/lines 10-38).

Regarding claim 15, Lownes discloses "in a digital television receiver, a method of inhibiting display of an inactive channel, comprising: receiving a digital broadcast signal comprising a virtual channel table; parsing the virtual channel table; retrieving identification information from the parsed virtual channel table indicating whether a channel is inactive; and and, in response to said identification information indicating that the channel is inactive, inhibiting display of said channel when said channel is selected by a user", i.e., Table 1 shows a virtual channel table (VCT) for a broadcast protocol with some of channels comprising identification in a bit stream syntax including active and inactive channels because the virtual channel assignment does not ensure the validity of available channels unless updating regularly in a cycle loop and the service does not start until a valid one is checked (Fig. 2/step 214 & 216, col. 5, line 50 to col. 6/line 64 with Table 1, and col. 7/lines 10-38).

As for claim 16, Lownes suggests "wherein retrieving the identification information comprises reading a value of a reserved field for identifying an inactive channel in the parsed virtual channel table", i.e., those reserve bits as shown within Table 1 includes active and inactive virtual channels as noted in claim 1 above because a flag is checked whether this channel is valid or not, see col. 7/lines 10-38).

As for claims 17-18, Lownes shows "wherein retrieving the identification information comprises reading a value of a program number field in the parsed virtual channel table"; "wherein retrieving the identification information comprises determining whether a service location descriptor is found in the parsed virtual channel table" (col. 6, Table 1 for program number field and service location with its ID).

Regarding claim 19-22, these claims for "a digital broadcast transmitter, a method of indicating an inactive channel, comprising: generating a virtual channel table, including within the virtual channel table information indicating the inactive channel; and transmitting the virtual channel table as part of a digital broadcast signal" are rejected for the reasons given in the scope of claims 15-18 above.

Regarding claim 23, Lownes discloses "a digital television receiver, comprising: receiving means for receiving a digital broadcast signal including a virtual channel table, the virtual channel table including identification information identifying a channel as being one of an active and an inactive channel; detecting means for detecting the identification information in the virtual channel table; and inhibiting means for inhibiting display of the channel when the channel is selected by the user and the channel is the inactive channel", i.e., Table 1 shows a virtual channel table (VCT) for a broadcast protocol with some of channels comprising identification in

a bit stream syntax including active and inactive channels because the virtual channel assignment

does not ensure the validity of available channels unless updating regularly in a cycle loop and

the service does not start until a valid one is checked (Fig. 2/step 214 & 216, col. 5, line 50 to

col. 6/line 64 with Table 1, and col. 7/lines 10-38).

As for claim 24, in further view of claim 23, Lownes discloses "wherein the virtual

channel table is included in a program and system information protocol for the digital broadcast

signal" (col. 1/lines 18-53).

Regarding claim 27, Lownes discloses "a digital television (DTV) receiver, comprising:

receiving means for receiving a digital broadcast signal including a virtual channel table, the

virtual channel table including identification information identifying a channel as being one of an

active and an inactive channel; a program and system information protocol (PSIP) decoder for

detecting the identification information in the virtual channel table and providing an output

indicating whether the channel is the inactive channel; and a user interface module for receiving

the output of the PSIP decoder and inhibiting display of the channel when the channel is selected

by the user and the channel is the inactive channel" (see claim 1, 15, 23 above with a PSIP

decoder (Fig. 1B for a digital set top box decoder using PSIP, col. 1/lines 29-52).

As for claims 28-30, these claims for "wherein the receiving means comprises:

demodulation means for demodulating the digital broadcast signal and outputting a baseband

signal; and decoder means for decoding the baseband signal and providing a PSIP data stream to

the PSIP decoder"; "wherein the demodulating means comprises a demodulator"; and "wherein

the decoding means comprises a transport decoder" are included within the PSIP decoder (Fig.

1B, and col. 3/line35 to col. 5/line 50).

Claim Rejections - 35 USC 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

5.   Claims 4-6, 11-14, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lownes et al. (U.S. Patent No. 6,137,539).

Regarding claims 4-6, Lownes does not shows "wherein said identification information

sets a value of a program number field in the virtual channel table to "0" to indicate that a

corresponding channel is an inactive channel"; "wherein said identification information sets a

value of a number of elements field of a service location descriptor in the virtual channel table to

"0" to indicate that a corresponding channel is an inactive channel"; and "wherein said

identification information indicates that a corresponding channel is an inactive channel whenever

a service location descriptor is not included in the virtual channel table"; however, the Examiner

takes an official notice that this feature is well known in the art. Table 1 of Lownes is simply an

example of a virtual channel table for some of channels of an illustration purpose only, and to

one of ordinary skill in the art, some other listed attributes or items within the VCT must be null

or identified as a "0" (zero) for its null value if it is not available or invalid and as if it does not

have a valid service location within the virtual channel table. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify Lownes'

system with a known feature as assigning a "0" value to invalid items or unavailable items for

displaying and identifying purposes. The motivation for doing this is to offer a list of inactive

channels and inactive service locations for displaying to the user.

As for claims 11-14, 25-26, and these claims for "wherein including identification

information further comprises setting a value of the program number field and a value of a

reserved field assigned for recognizing an inactive channel in the parsed virtual channel table to

"0."; "wherein determining at the receiver whether the channel is inactive comprises determining

that the channel is inactive when a corresponding service location descriptor is not received in

the virtual channel table"; "wherein determining at the receiver whether the channel is inactive

comprises determining that the channel is inactive when a value of a reserved field assigned for

recognizing an inactive channel in the parsed virtual channel table is "0."; and "wherein

determining at the receiver whether the channel is inactive comprises determining that the

channel is inactive when a value of a program number field in the virtual channel table is "0" "

are rejected for the reasons given in the scope of claims 4-6 as disclosed above.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Eyer (US Patent 6,483,547 B1) and Vancelette (US Patent 5,894,320) discloses systems related

to digital video TV with Virtual Channel Table.

7.   **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

*Hand—delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).*

8.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Krista Kieu-Oanh Bui whose telephone number is (703) 305-0095. The

examiner can normally be reached on Monday-Friday from 9:00 AM to 6:30 PM, with alternate

Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Christopher Grant, can be reached on (703) 305-4755.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to Technology Center 2600 Customer Service Office whose telephone number

is (703) 306-0377.

Krista Bui
Art Unit 2611
October 26, 2004

KRISTA BUI
PATENT EXAMINER